CA- 2 WEB DEVELOPMENT ASSIGNMENT REPORT

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Answer 1
Web Application

A web application is a program that is provided via the internet using a browser interface and is kept on a remote server. In general, a web application can include social media platforms, calculators, webmail, online stores (or e-commerce shops), etc.

To display data and information to users, some of them also employ client-side languages like JavaScript and HTML, while some web applications use both server-side and client-side functionality simultaneously.

A web application is typically a computer program that resides on a remote server. It can be accessed by anyone using one of the widely used web browsers, the majority of which are free to use for everyone, such as Google Chrome, Safari, Microsoft Edge, etc.

Some online applications are completely static and don't need any server-side processing; in contrast, some web apps are dynamic and do need server-side processing. In order to run a web application, we typically needed an application server as well as a web server (or more precisely, some space on the web server for our programs or applications code).

The application server completes the tasks that the client's request, which occasionally also require a database to store the data.

Answer 2 and Answer 3
Web application development technologies and their uses

The technologies I have used to develop my website consisted of the following:

a) **HTML (Hyper Text Markup Language):**

HTML as the name suggests is a Markup language. It provided the layout for the website and how the structure is gonna be- like the header, body and footer . It has tags like paragraph, anchor for links, table tag, label and button. In an ASP .net environment for many HTML tags it had an alternative like label and buttons even for tables and links.

b) CSS(Cascading Style Sheet)

CSS helps add design to the website.It adds a variety of changes to the layout already set by HTML like margin, padding, font style, font family, colour, background image.
I preferred adding CSS to my website after covering HTML, Javascript and backend work because it only made sense to have a layout and functionality and then add design to it. If I added design first and later on if it didn't work because of the functionality, CSS would be there but it would have no function.

c) Javascript

Javascript is a programming language which helps adding functionality to the website. It allows the user to see more to just the layout set by HTML. For example, a button on a website page would do nothing till a click event is added to it. For HTML buttons, an on click event can be decided as to what it will do by adding a javascript function.

d) Jquery

A javascript library. It creates functions like traversing and manipulating HTML documents, animation, and event management.

e) .NET framework

A .NET framework is a framework which is already created by Microsoft to create a website. It is used to create websites and it makes it easy for the developer as it helps by adding one or more master pages. Master page is a basic layout which a lot of aspx pages will consist of. So they would have a consistent layout throughout every aspx page.

f) C#

C# is a programming language which can help the developer to have different functions. An example of this which was also used in this assignment was to have different price values. Suppose the user selects a student discount on a product now the price displayed to the user has to be deducted which can be done using C# at the backend of the website

g) MySQL for Database

Microsoft MySQL is another technology which can be used to create a website. Databases hold large data. The information entered by different users can be entered and stored in a database. You can even display, edit or delete the data. An example of this would be a shopping cart. The data of what is added to cart differs from every user and Database is what helps store it.

Answer 4

Alternatives to the above mentioned technology

Various alternatives that can be used instead of the ones mentioned above are:

Alternatives to HTML

- Google Web Designer helps to add image galleries, maps, visual effects, and other features to your website.
- WordPress enables you to host and create websites. WordPress has a template system and a plugin architecture that allow you to customise any website to meet your company, blog, portfolio, or online store.
- React.js open source framework helped create Facebook. In comparison to using pure JavaScript, it is used to quickly and effectively create interactive user interfaces and web applications.

Alternatives to CSS

- Bootstrap is a free, open-source front-end development framework and is used to build websites and web applications. Bootstrap offers a collection of vocabulary for template designs and is designed to enable responsive construction of mobile-first websites.
- Sass is a CSS extension. A CSS preprocessor is Sass. All versions of CSS are fully compatible with Sass. Sass saves time by minimising CSS repetition.

Alternatives to Javascript

- Typescript, an object-oriented programming language, notably in front-end development. Typescript is a programming language that was first created by Microsoft and is quite similar to JavaScript.

- Flutter is another open-source software development platform developed by Google. It is used to create software primarily for Android, iOS, Windows, and many other platforms.

Alternatives to Jquery

- Zepto has a sizable jQuery compatible API. The jQuery equivalents are fully covered by these APIs. The major goal is to create a modular library with extensible APIs that allows for quick download and execution. Zepto is made available under an MIT licence.
- TypeScript, a modernised JavaScript UI, is also called Syncfusion Essential JS2. Its distinguishing characteristics include its lightweight, modular library, and reduced overhead.

Alternatives to .NET Framework

- Mono project is a free and open-source initiative lead by Xamarin and it aims to create a set of tools that includes a C# compiler and a Common Language Runtime, among other things.
- Delphi is extremely quick and is always being improved, so you can be sure it will stay current. It is simple to transfer because it is compatible with the.NET framework's functionality.

Alternatives to C#

- C# and Java are fairly close to each other in terms of syntax. It is an object-oriented, compiled language that is translated into. NET Intermediate Language. C# was initially employed for web programming using ASP.NET and Windows Forms development with a Microsoft focus.
- Python is an interpreted, high-level, dynamic, free, and open source programming language. Both procedural-oriented and object-oriented programming are supported. Since Python is a dynamically typed language, we don't need to declare the type of a variable.

Alternatives to MySQL

- Amazon Relational Database Service (RDS), a relational DB in the cloud can be easily set up, run, and scaled using a web service that supports Amazon Aurora, PostgreSQL, MySQL, MariaDB, Oracle, and Microsoft SQL Server.
- Azure is a relational database which uses the Microsoft SQL Server Engine. Without having to worry about managing infrastructure, you can create data-driven websites and applications using the high-performance, dependable, and secure SQL Database.

Removed Section

A section was removed which showed a login page consisting of login and signup form. Because it used Database and would not let the user use the rest of the website till the user logged in. I had to remove it, because Database didn’t work on a third party computer.

Working Dashboard Clip